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(54) **SUPER-JUNCTION SEMICONDUCTOR ELEMENT**

layer outside the active region in a vertical direction of the parallel pn layer.

(57) Abstract:

PROBLEM TO BE SOLVED: To provide a super-junction semiconductor element which prevents generation of electric field convergence and realizes a high breakdown voltage in the super-junction semiconductor element comprising a parallel pn layer in which a current flows in an on state and which depletes in an off state.

SOLUTION: (1) A parallel pn layer of (n) drift regions 12d, 12f, 12h, 12j, 12l, and (p) partition regions 12c, 12e, 12g, 12i, 12k, 12m is provided outside an active region. (2) A first FP electrode 17a is provided on the (n) drift region 12d of the parallel pn layer outside the active region via an insulation film 19. The first FP electrode 17a comes into contact with a surface of the inside (p) partition region 12c, or is floated. It may be across a plurality of the (n) drift regions. Furthermore, a resistor is provided between the neighboring FP electrodes. (3) There is provided an (n) stopper region which reaches a low resistance

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